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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
10/083,385	02/27/2002	Satoshi Hirahara	220049US0	4760	
22850	7590 10/30/2003		EXAMINER		
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.			VO, HAI		
	IA, VA 22314		ART UNIT	PAPER NUMBER	
	,		1771		

DATE MAILED: 10/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

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A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION. Experience for an emyte be reliable used the provision of 3 CFR 1.73(e). In no event, however, may a reply be timely filled. Experience for many by the mise used the provision of 3 CFR 1.73(e). In no event, however, may a reply be timely filled. If the period for reply septicide above is less than thery (30) days, a reply within the stabulary minimum or thinty (30) days, and will experience (50) (MONTHS films the mailing date of this communication or reply is specified above is less than thery (30) days, a reply within the stabulary minimum or thinty (30) days, and will experience the mailing date of this communication. Falsure to reply septicide the stabulary profit will be stabulary minimum or thinty (30) days will be considered timely. If the period for reply is specified above is less than thery (30) days, a reply within the stabulary minimum or thinty (30) days will be considered timely. If the period for reply is specified dots on the maining date of this communication. Falsure than a stabulary minimum or the maining date of this communication. This action is FINAL. 2b) Responsive to communication(s) filled on 01 May 2003. Status This action is FINAL. 2b) This action is non-final. Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213. Claim(s) 1.36 is/are pending in the application. 4) Claim(s) 1.36 is/are pending in the application. 4) Claim(s) 1.36 is/are pending in the application. 4) Claim(s) 1.36 is/are rejected. 7) Claim(s) 1.36 is/are rejected to . 3) Claim(s) 1.36 is/are rejected to . 3) Claim(s) 1.36 is/are rejected to . 4) Claim(s) 1.36 is/are rejected to . 4) Claim(s) 1.36 is/are rejected to . 4) Claim(s) 1.36 is/are rejected to . 5) Claim(s) 1.36 is/are rejected to . 5) Claim(s) 1.36 is/are rejected to . 6) Claim(Application No.	Applicant(s)				
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	1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.	5) Notice of Informa					

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Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- 2. Claims 1-13, 15 and 30 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Miwa et al (US 4,851,304). Miwa teach a porous electrode substrate for fuel cell comprising a carbon fiber mat impregnated with a resin wherein the carbon fiber having a fiber diameter of 4 to 9 microns within the claimed range (abstract). Miwa teaches the porous substrate having a thickness and resistivity within the claimed ranges (table 4). Miwa teaches the substrate comprising carbon fiber bonded to one another by an epoxy resin binder in an amount from 5 to 20 wt%, within the claimed range (column 7, line 39). It appears that the substrate of Miwa is made of the same composition as the conductive carbonaceous fiber sheet of Applicants. Further, Miwa and Applicants are using the same process to produce the carbon fiber (column 7, line 40 et seq.). It is the examiner's position that the basic weight, bending resistance, air permeability, degree of fluffing would be inherently present. This is in line with *In re* Spada, 15 USPQ 2d 1655 (1990) which holds that products of identical chemical composition can not have mutually exclusive properties. Note In re Best 195 USPQ at 433, footnote 4 (CCPA 1977) as to the providing of this rejection under 35 USC

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103 in addition to the rejection made under 35 USC 102. It is the examiner's position that Miwa anticipates or strongly suggests the claimed subject matter.

Claim Rejections - 35 USC § 103

- 3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 4. Claims 1-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muraki et al (US 5,599,612) in view of Suzuki (US 5,439,746). Muraki teaches a prepreg for uses in golf clubs having a bending resistance of 7mm to 12 mm (column 7, lines 40-45) and a unit weight from 120 to 250 g/m2 (column 5, line 15) within the claimed ranges. Muraki teaches the woven carbon fiber fabric obtained by weaving carbon fiber bundles into woven fabric (column 2, lines 55-60). Muraki teaches the prepreg comprising woven carbon fiber fabric bonded to one another by an epoxy resin binder in an amount of 40 wt%, within the claimed range (example 2). Muraki teaches the prepreg comprising a low temperature type hardener in an amount of 0.1 to 1 wt% (column 8, lines 45-47). It appears that the prepred of Muraki is made of the same composition as the conductive carbonaceous fiber sheet of Applicants. Further, Muraki and Applicants are using the same process to produce the carbon fiber (column 3, line 15 et seq.). It is the examiner's position that the volume resistivity, air permeability, degree of fluffing would be inherently present. This is also in line with In re Spada. Muraki does not specifically disclose the thickness of

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the prepreg. Suzuki teaches a prepreg useful as a golf club shaft comprising a carbon fiber that is impregnated with an epoxy resin (abstract). Suzuki teaches the prepreg having a thickness of 200 microns or 0.2 mm (column 14, line 28). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the prepreg having a thickness instantly claimed because such is a typical thickness of the golf club shaft and Suzuki provides the necessary details to practice the invention of Muraki.

With regard to claims 6 and 20, Muraki does not specifically disclose the fiber diameter of the carbon fiber. Suzuki teaches the prepreg comprising the carbon fiber having a diameter of 7 microns (column 14, line 52). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the carbon fiber having a diameter instantly claimed motivated by the desire to provide improved tensile modulus to the composite structure.

With regard to claim 26, Muraki does not specifically disclose the carbon fiber being a product of carbonization of acrylic fibers. Suzuki teaches the carbon fibers being a product of pitch-series carbon fiber (column 12, line 48). Such is known in the art and Suzuki provides the necessary details to practice the invention of Muraki.

With regard to claims 30-36, Muraki does not specifically disclose the prepreg being used as a gas diffusion layer material of a solid polymer electrolyte fuel cell. However, it has been held that a recitation with respect to the manner in which a claimed conductive carbonaceous fiber sheet is intended to be employed does not differentiate the claimed conductive carbonaceous fiber sheet from a prior art label

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satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (703) 605-4426. The examiner can normally be reached on M,T,Th, F, 8:30-6:00 and on alternating Wednesdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (703) 308-2414. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

HV

DANIEL ZIRKER PRIMARY EXAMINER GROUP 1300

Daniel Zukin

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